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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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Ref: EPR ER

INITIAL POLLUTION REPORT
Superior Waste Rock
Superior, Mineral County, Montana

I. HEADING

Date: 08/27/02
From: Tien Nguyen, On-Scene Coordinator
Agency: EPA
Unit: Region VIII - Emergency Response Program
999 18th Street, Suite 300
Denver Colorado 80202
(303) 312-6820
To: Kelvin Mould, EPA Headquarters
POLREP No.: Initial
Site: Superior Waste Rock

II. BACKGROUND

Site Number: 08-ER
Party Conducting the Action: EPA
Response Authority: CERCLA
NPL Status: No
Action Memorandum Status: 08/02/02
Date Action Started: 08/20/02
Completion Date: TBD

III. SITE INFORMATION**A. Incident Category**

Time Critical, Fund-Lead

B. Site Description**1. Site description**

The Site covers the town of Superior, in Mineral County, Montana, where tailings reportedly have been used as a fill surface soil and contamination exists at local residences and the Superior High School track. The Site is located down stream from the Flat Creek drainage, along the banks of the Clark Fork River, and approximately 3.5 miles south of the Iron Mountain Mine and Mill. The waste rock/tailings reportedly are from the Iron Mountain Mine and Mill.



2. Site evaluation

On October 16-18, 2001, Region VIII EPA conducted a PA/SI at the Site and collected 44 environmental samples from the area, including 11 samples within the Town of Superior. These eleven soil samples were collected from the high school track and residential properties in Superior. Most of the samples had concentrations of several analytes at least three times above the background sample - specifically, antimony had concentrations ranging from 34.4 parts per million (ppm) to 1,050 ppm, arsenic ranging from 79.4 to 1,690 ppm, lead from 423 ppm to 8,500, and mercury from 0.32 to 12.4 ppm. The background soil sample contained arsenic at 3.9 ppm and lead at 6 ppm. During sampling activities at the Town of Superior, it was observed that the main source of contamination is mine tailings, reddish materials, which were brought to the Town of Superior as fill. Therefore, the potential targets for the surface soil contamination are local residents where the elevated metals are located and the Superior High School track where the 383 elementary and high school students attend school in the Superior School District. The thickness of this fill ranges between 2 to 4 inches at the residential areas and 6 to 8 inches at the high school track, and the total volume of tailings and contaminated soils is estimated to be about 5,300 cubic yards.

On January 23, 2002, the Montana Department of Environmental Quality (MDEQ) requested EPA to evaluate the Superior High School track and Superior residential properties for a possible removal action. From the results, a Site Sampling Plan has been developed and from June 4 - 12, 2002 the EPA Region VIII Removal Program tasked START2 Contractor to collect surface and sub-surface soil samples for XRF on-site screening. A total of more than 650 samples were collected from nearly 100 residential properties, who had signed an Access On Consent with EPA, and twelve separate areas, including right-of-ways and Town/County properties within and around Superior, which were identified as potential contaminated areas by the Mineral County Health and the Superior's Public Work personnel.

Preliminary XRF results show that nine residential properties, three Town/County properties (the High School track, the County fairground, and the Town shop) and five right-of-way locations have elevated levels of lead and arsenic contamination. These levels are ranging from 500 ppm to 11,000 ppm for lead or from 100 ppm to 1,700 ppm for arsenic. Ten percent of these XRF soil samples were sent to the labs for analytical confirmation. Four of these samples were also run for Toxicity Characteristics Leaching Procedures (TCLP). On July 9, 2002, the preliminary sampling results indicated that all four samples failed TCLP for lead. These results ranged from 36 mg/l to 140 mg/l; the regulatory standard for lead is 5 mg/l. The four samples were collected from the high school track, the County fairground, the home at 201 Spruce (along the fence line), and the home at 208 Main street (forest service home).

3. Description of threat

Arsenic and lead have been identified as the contaminants posing the greatest risk and hazard; however, other metals, including antimony, cadmium, copper, iron, manganese, mercury, silver, and zinc have levels of concentrations at over three times the level of background samples. The threats posed by this Site include dermal absorption; ingestion of potentially contaminated plants and fish; and the inadvertent ingestion of contaminated soil and surface water.

IV. RESPONSE INFORMATION

A. Situation

1. Removal actions

On August 20, 2002, the OSC and EPA's Emergency Response Contractor mobilized to the Site to initiate excavation of contaminated soils. They will be staged in bulk at the Mineral County Airport ground in preparation for treatment and disposal.

2. Disposal

The MDEQ and Mineral County officials have agreed to provide the Mineral County Airport ground, approximately 2 to 3 miles from the Site, to be used as a redepository for the contaminated soils. The tailings and contaminated soils which failed TCLP will be treated before being landfilled and capped.

3. State and Local Role

As a result of concern expressed by the community, the threats posed at the Superior Waste Rock Site and the inability of the State to fund removal of the potentially hazardous materials, the State requested assistance from EPA in undertaking a Removal Action. Staff members from MDEQ, Mineral County Health, School District, and the Town of Superior are working with EPA on a continuing basis. They will continue to be informed and involved.

4. Enforcement

The Agency is in contact with the PRPs and will make a determination as to the appropriateness of issuing a General Notice letter to them in the next few days.

B. Future Plans

As soon as excavation of contaminated soils is completed at the high school track, work will be initiated at the county fairground, along the fence line at 201 Spruce Street, and the driveway at 208 Main Street. The contaminated soils and mine tailings located in these other areas, including residential properties and the right-of-ways will be included in the Removal Action if the average surface soil concentration exceeds 3,000 mg/kg of lead or 400 mg/kg of arsenic. The soil will be removed to a maximum depth of 12", except for vegetable gardens - which will be removed to a maximum of 24". The excavated areas, including the high school track, the county fairground, and the right-of-ways will be backfilled using materials comparable with existing materials or a combination of cleaned, compacted gravel and 4" of asphalt on the surface.

V. COST INFORMATION

Initial costs for the first Phase of this Removal have not been received at this time but the estimated EPA costs for this Phase of the Removal is \$350,000.